

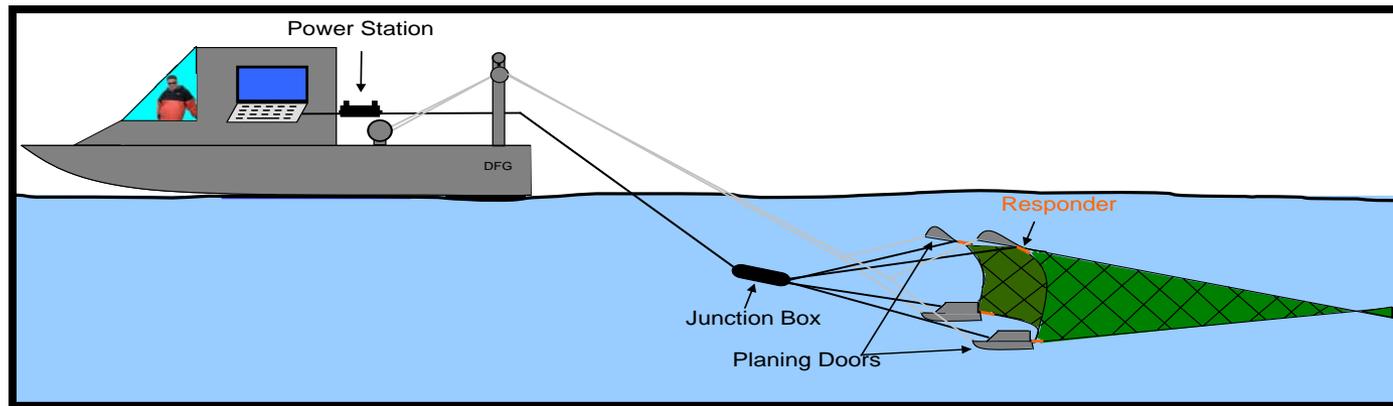
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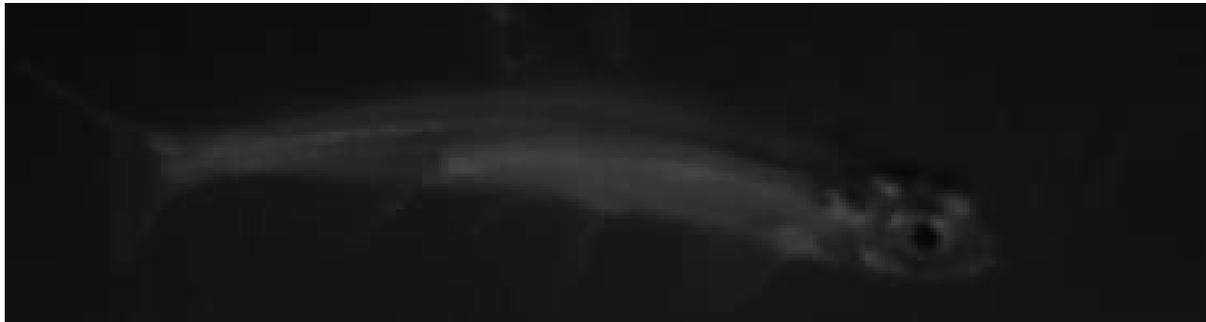
Uncertainties in fish sampling

- Relative abundance indices rely on consistency across time in sampling gear and methods
- Don't provide population size, but do provide important trend info; assumed related to population size
- Working to improve – what's been done
 - Acoustically measured net mouth area for midwater trawls – estimate true volume filtered
 - Electronically tracking net depth in the water



Uncertainties in fish sampling (continued)

- Working to improve – what we've planned
 - Use “SmeltCam” to identify vertical and lateral distributions of pelagic fishes – November 2012



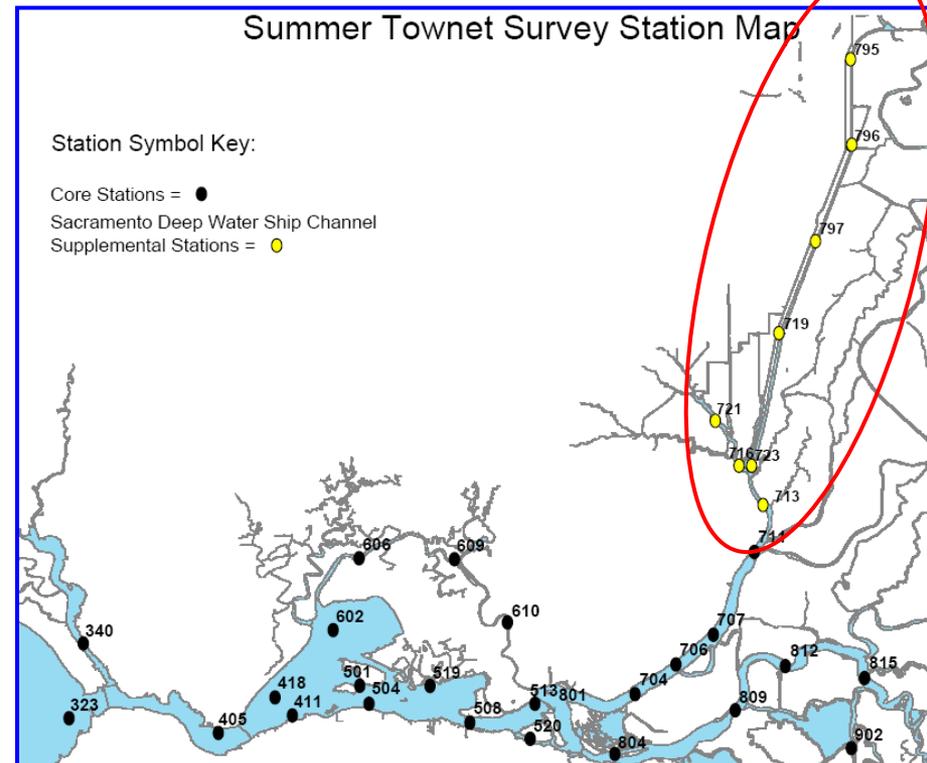
First picture of wild delta smelt – Cache Slough fall 2010

- Use simultaneous multi-trawl sampling to determine relative size selectivity of the gears – September 2012

Uncertainties in fish distribution

- Working to improve – what we've done
 - Examined lateral and longitudinal distribution of age-0 striped bass (Sommer et al. 2011a)
 - Partially examined change in longitudinal distribution of longfin smelt (Baxter et al. 2010)

– Added fish monitoring stations -- Cache Slough & Sacramento Deepwater Ship Channel



Uncertainties in fish distribution

- Working to improve – what we're planning
 - Contrast delta smelt fall habitat use -- Cache Sl./SDWSC with the low salinity zone (Fall Low Salinity Habitat studies)
 - Further investigation into delta smelt health, growth and fecundity benefits relative to habitat choices --
(Teh et al. 2011. Fall X2 fish health study: contrasts in health indices, growth and reproductive fitness of delta smelt and other pelagic fishes rearing in the low salinity zone and Cache Slough Regions. Funded Ecosystem Restoration Program Grant)